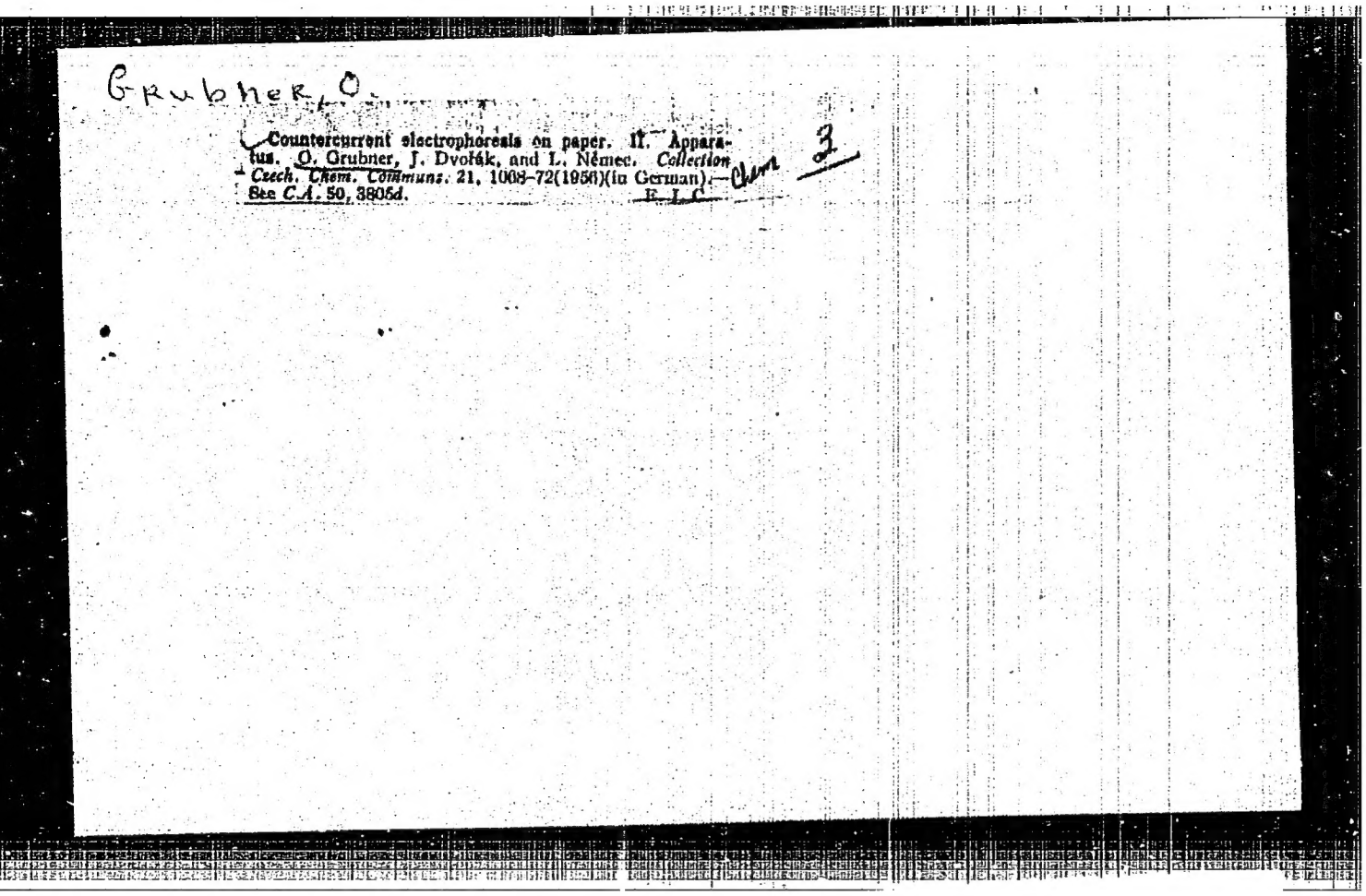
GRUBNER O.

Hydrogenation of benzene on nickel powder catalyst. Preliminary communication. J. Čubbar, O. Grubner, and K. Kller (Čsl. akad. věd, Prague). *Chem. Listy* 49, 1905-6 (1955).—Decompn. of Ni oxalate in a stream of H at 320° yielded an active *hydrogenation catalyst* suitable for the reduction of C_6H_6 to C_6H_{12} even at moderate temps. and ordinary pressure. The Ni was dild. with SiO_2 dust, which increased the conversion. A 100% conversion was obtained at 80° with a catalyst contg. 8% Ni and space velocity of ~340 ml./hr.

M. Hudlický



Grubner, O.

Countercurrent electrophoresis on paper. II. Apparatus. O. Grubner, J. Dvořák, and L. Němec. *Collection Czech. Chem. Communs.* 21, 1068-72(1956)(in German).—Chem 3
See *C.A.* 50, 3805d. E. J. C.

Grubner, O.

Czechoslovakia/Physical Chemistry - Surface Phenomena. Adsorption. Chromatography. Ion Exchange, B-13

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 595

Author: Dvorak, J., and Grubner, O.

Institution: None

Title: Countercurrent Electrophoresis on Paper. III. Longitudinal Flow of Liquid Through the Paper with the Current Shut Off

Original Periodical: Chem. listy, 1956, Vol 50, No 1, 36-42

Abstract: In their investigation of the factors which affect the distribution of the components separated by countercurrent electrophoresis on paper, the authors have studied the velocity of flow of liquids along strips of chromatographic paper, i.e., the so-called "longitudinal flow velocity" U, for which they confirmed the Kozeni-Karmani equation. The authors have measured the value of U for various slopes and for different paper strip lengths, taking into account the effect of evaporation. The liquid content of the various paper sections was

Card 1/2

Czechoslovakia/Physical Chemistry - Surface Phenomena. Adsorption. Chromatography. Ion Exchange, B-13

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 595

Abstract: determined by freezing the latter in liquid air and weighing. The linear flow rate at different points on the paper was determined from the displacement of the boundary of radioactive $H_3P^{32}O_4$. It has been established that this flow rate depends mainly on the evaporation. Values for the characteristics of wet and dry Whatman No 4 paper are presented in a table. Among the data included are values for the thickness, total volume, density, porosity, surface area (determined by nitrogen adsorption), the Kozeni constant, and the number and radius of the pores. For communication II see Referat Zhur - Khimiya, 1956, 75470.

Card 2/2

GRUBNER, O.

Production of highly active powder-form nickel hydrogenation catalysts. V. Deneš, J. Čáblová, O. Grubner, K. Klier, and F. Ježo (*Coll. Czech. Chem. Commun.*, 1957, 22, 537–547).—Extremely active Ni catalysts are produced by heating specially purified nickel oxalate *in vacuo* at 325° for 4 hr. These achieve 100% hydrogenation of purified benzene vapour with oxygen-free hydrogen at 73°, while similar mixed Ni–MgO catalysts made from the mixed oxalates are as effective at 51°. These catalysts become much less active in the presence of traces of O or S compounds. (34 references.) (In German.)

A. B. Davis.

Z/009/60/000/011/001/001
E112/E153

AUTHORS: Dolejšek, Z, Grubner, O, Hanuš, V, Kössler, I, Matyska,B, and Vodehnal, J.

TITLE: Analytical Control of Isoprene Rectification

PERIODICAL: Chemický průmysl, 1960, No, 11, pp. 571 - 575

TEXT: For the stereoscopic polymerization of isoprene, monomers of sufficiently high quality are essential. Purification of isoprene on a large scale is carried out by distillation processes. Technical isoprene contains various saturated and unsaturated hydrocarbons with 4, 5 or 6 carbons. Separation is accomplished by azeotropic distillation, adding acetaldehyde, propylene oxide, methyl formate, methanol, isopentane, isopropylamine, acetone, water or aqueous acetone as azeotropic agent. As the literature does not contain sufficient data about the boiling points of the different mixtures the authors have undertaken a study of the normal rectification of isoprene on efficient columns and have followed the concentrations of the different components in the various cuts. The effect of water and methyl alcohol as azeotropic agents was also considered.

Card 1/ 6

Z/009/60/000/011/001/001
E112/E153

Analytical Control of Isoprene Rectification

Two types of isoprene from different sources were investigated: 1) Soviet material, with 96% isoprene content, and 2) Czechoslovak material, prepared from isobutylene and formaldehyde, with 13% isoprene. The different distillation fractions were analysed by mass spectrography, infrared spectroscopy and gas chromatography, using thermoconductivity cells for detection. A chromatogram of sample B (Czechoslovak), e.g. first sample of condensate from still-head is shown (Fig.1), revealing 8 peaks and identified as follows: 1) isobutylene, not isolated in pure state but found in one fraction in an amount of 15% together with 85% 3-methylbutene-1; 2) and 3), peaks appertaining to butene-1 and butene-2 (confirmation of structure through mass spectrography); 4) 3-methylbutene-1 (this compound was isolated from one fraction in 99.5 purity and identified spectroscopically by comparison with data in the literature; 5) 2-methylbutene-1 (this compound was identified by comparison with literature data. It was obtained by fractional distillation in approximately 80% purity. It was also obtained by preparative

Card 2/6

Analytical Control of Isoprene Rectification

gas chromatography, and both samples proved identical); 6) isoprene: standard prepared by fractional distillation in 99.98% purity and by preparative chromatographic method (ethyl cyclopentanecarboxylate as stationary phase); 7) 2-methylbutene-2 prepared by fractional distillation in 98% purity (identified by method used for 3-methylbutene-1; compound prepared for identification purpose also by preparative gas chromatography). Chromatogram of sample A (Soviet isoprene) revealed similar characteristics. A special peak (4b) was noticed, the identity of which was not yet determined. Results of practical distillation tests were as follows. Sample A was distilled over a low-efficiency column with reflux ratio 13:1. Pentene contents were reduced from 4 to 1.2%, and isoprene of 98.8% purity and in yields of 80% was collected. Using a more efficient column with reflux ratio 40:1 equilibrium was established after 2 hours and isoprene of 99.98% purity was obtained in poor yields. Attempts to improve yields by the addition of azeotropic agents (methanol, water) failed. Distillation of sample B was undertaken

Z/009/60/000/011/001/001
E112/E153

Analytical Control of Isoprene Rectification

over a column with reflux ratio 4:1. The concentration of isoprene in the middle fraction was doubled and the distillate contained only four components: 3-methylbutene-1; 2-methylbutene-1; isoprene; 2-methylbutene-2. A further fractionation over a column with reflux ratio 25:1 yielded further fraction, from which only those containing 2-methylbutene-1, isoprene and 2-methylbutene-2 were collected. Distillation of the three combined fractions over a column with reflux ratio 40:1 gave a two-component mixture in which the pentene concentration amounted to only 13%. By azeotropic distillation with acetone, conversion into high-grade isoprene could be achieved. It is claimed that yields were satisfactory. Acknowledgements are made to Doctor J. Pech, director, VÚSK Gottwaldov for useful advice and for supplying some of the raw materials.
There are 6 figures, 4 tables and 16 references (including several patents to one reference): 11 English, 4 Czech and 1 Soviet.
ASSOCIATION: Ústav fyzikální chemie ČSAV, Praha (Institute for Physical Chemistry, ČSAV Prague)
Card 4/6
SUBMITTED: June 6, 1960

GRUBNER, O.

Contribution to the analysis of the structure of powder-forming substances using the flow of gases. Coll Cz Chem 25 no.1:180-193 Ja '60. (EEAI 9:12)

1. Institut fur physikalische Chemie, Tschechoslowakische Akademie der Wissenschaften, Prag.
(Porosity) (Gas flow)

VACIK, J.; GRUBNER, O.; DVORAK, J.

Countercurrent electrophoresis on paper. V. Geometrical structure of chromatographic paper. Coll Cz chem 25 no.3:625-635 Mr '60. (EEAI 9:12)

1. Institut fur physikalische Chemie, Karlsuniversitat, Prag, und Institut fur physikalische Chemie, Tschechoslovakische Akademie der Wissenschaften, Prag.
(Electrophoresis) (Chromatography)

Z/009/61/000/002/002/008
E112/E453

AUTHORS: Grubner, O. and Benešová, V.

TITLE: Apparatus for Determining Surface Areas of Powdered Substances From Gas Absorption Data

PERIODICAL: Chemický průmysl, 1961, No.2, pp.71-73

TEXT: Calculating surface areas from absorption data depends on the correct interpretation of absorption isotherms. To determine the volume (V_m) of a unimolecular layer on an absorbent with accuracy presents difficulties. It is equally difficult to measure exactly the surface areas of the absorbed molecules. The surface areas of the latter are, generally, calculated by using nitrogen as standard and by comparing their absorption with that of nitrogen. Results will, however, be affected by the surface characteristics of the absorbent, such as unevennesses, micro-capillary structure and geometrical form. The authors have constructed apparatus for the determination of surface areas of powdered substances by means of gas absorption, the arrangement of which is shown. It consists of: mercury reservoir (ZR), gas buret (PB), manometer (RM), with calibrating scale (m), manometer calibrations (z_1, z_2, z_3, z_4, z_5), sample container (V), thermostat (T)

Card 1/6

vacuum and gas-delivery tubes and gas reservoir. The dimensions of the apparatus permitted measuring surface areas greater than 0.5 m^2. Argon was used as absorbate. In order to determine the accuracy of the apparatus, the authors have attempted to analyse the different sources of errors which may affect the results and have taken as basis the Brunauer, Emmet and Teller equation for the volume of nitrogen, required to complete a unimolecular layer:

$$v_m = \frac{v_a (p_s - p_i)}{p_i} \left[\frac{1}{c} + \frac{(c-1) p_i}{c p_s} \right] \quad (1)$$

where v_m = volume of unimolecular layer of absorbed gas
p_s = saturation pressure of the adsorbate
p_i = measured pressure of gas
c = constant
v_a = measured volume of adsorbed gas.

The accuracy of the measurements can be fundamentally affected by: 1, impurities of apparatus and substances; 2, errors in calibration of volume V_b of the gas buret, 3, inaccuracy in measuring volume V_{mb} outside the buret area; 4, inaccuracy in measuring the free volume V_d of the sample; 5, inaccurate determinations of initial gas pressure p_o, saturation pressure p_s and measured pressure p_i; 6, insufficient control of thermostat. The authors have investigated how the different elements of error affect results and have taken as model substance the measuring of the surface area of a nickel catalyst, which amounted to 14 m^2/g and where the other values were as follows p_o = 6.55 cm Hg; p_i = 3.27 cm Hg; p_s = 20 44 cm Hg, V_o = 72.54 cm^3; V_{mb} = 3.6 cm^3, V_d = 16 8 cm^3 V_b = 17.7 cm^3 and c = 42. The changes in value of v_m (unimolecular layer) obtained for a relative change of 1% in the measured values p_o, p_i, p_s, V_b, V_{mb}, V_d were as follows:

Value	p_o	p_i	p_s	V_b	V_{mb}	V_d
Change	+1.72%	-1.04%	+0.32%	-0.4%	-0.04%	-0.22%

It is concluded that the mean error of v_m, resulting from inaccuracies in the calibration of the apparatus and faulty readings of the experimental values will not exceed 2%. (A mean error of 5% is quite acceptable for the reproducibility of absorption work.) The effects of impurities of mercury sample and apparatus were not determined. Impurities of the gas will not influence the results up to a concentration of 1% unless they take part in a chemical reaction. Maintaining constant temperature is of utmost importance but temperature stability of $\pm$ 1 C will be sufficient. Surface areas of samples of TiO_2 of varying quantities and volumes were measured to confirm the efficiency of the apparatus. Two samples of argon of different degree of purity were used. The pressures were read by naked eye, calibration of the apparatus and determination of volumes was conducted with an accuracy of 0.1 cm^3 and thermostatting with $\pm$ 0.2°C. Results of measurements were presented graphically showing reproducibility of the determinations

with a limit of error of 4%, which was in complete agreement with theoretical considerations. The authors have determined the surface areas of more than 100 samples and claim perfect and simple functioning of the apparatus. Acknowledgments are expressed to Professor Doctor Eng. V.Daneš, Eng. P.Jíra, J.Nováková and to members of ÚFCH ČSAV for advice and assistance and particularly to V.Růžička and J.Saňek. There are 3 figures, 2 tables and 2 references: 1 Czech and 1 non-Czech.

ASSOCIATION: Ústav fyzikální chemie ČSAV, Praha
(Institute of Physical Chemistry, ČSAV)

SUBMITTED: March 5, 1959

Z/009/61/000/007/003/004
E112/E135

AUTHORS: Dolejšek, Z., Grubner, O., Hála, E., Hanuš, V., and Kossler, I.

TITLE: Contribution to the purification and analysis of isoprene. II.

PERIODICAL: Chemický průmysl, 1961, No.7, pp. 361-363

TEXT: The production of polyisoprene requires the use of a monomer of highest purity. Distillation methods are suggested for the isolation of isoprene; it is stated that recovery processes will be successful if based on a thorough knowledge of vapor-liquid equilibrium data of the main components of technical isoprene. The present paper describes the determination of equilibrium data for mixtures of 2-methylbutene-1 (component 1), isoprene (component 2) and 2-methylbutene-2 (component 3). The above components were first purified and their mixtures then studied in a modified vapor-liquid equilibrium still, developed originally by D.T.C. Gillespie (Ref.2: Ind.Eng.Chem. A.E., 18, 575 (1946). A diagram of the apparatus is shown in Fig.1 and the experimental procedure is described. (A - inlet tube, C - Cottrell pump,

Card 1/ 6

Z/009/61/000/007/003/004
E112/E135

Contribution to the purification and analysis of isoprene. II.

E - equilibrium chamber, CH - condenser, K, P - sample chambers, R - disengagement chamber, V - boiler). In operation, sample chambers K, P and boiler V are filled with a measured quantity of the hydrocarbon mixture and the boiling rate adjusted so as to maintain the steady pumping of liquid and vapour through the Cottrell tube. After allowing sufficient time of operation to ensure steady conditions within the apparatus, samples of the boiling liquid and condensed vapour are withdrawn from chambers K and P by means of a cooled syringe and collected in glass ampoules for analysis. Analytical data are tabulated which enable the calculation of the correlation between relative volatility and composition of the liquid phase. The equation for a binary system is as follows:

$$a_{12} = \frac{y_1}{x_1}\frac{x_2}{y_2} = \frac{1 + 0.102\ x_2}{1 - 0.093\ x_1} \qquad (1)$$

$$a_{13} = \frac{y_1}{x_1}\frac{x_3}{y_3} = \frac{1 + 0.410\ x_3}{1 - 0.291\ x_1} \qquad (2)$$

Card 2/6

Contribution to the purification and analysis of isoprene. II.

$$a_{23} = \frac{y_2}{x_2}\frac{x_3}{y_3} = \frac{1 + 0.180\ x_3}{1 - 0.083\ x_2} \qquad (3)$$

where: x_1, x_2, x_3 are molar fractions of components 1, 2 and 3 in the liquid phase; y_1, y_2, y_3 are molar fractions of components 1, 2 and 3 in the vapour phase; and a_{12}, a_{13}, a_{23} the relative volatilities of the subscript components. Ternary systems follow the following equations:

$$a_{13} = \frac{y_1}{x_1}\frac{x_3}{y_3} = \frac{1 + 0.410\ x_3 + 0.102\ x_2}{1 - 0.291\ x_1 - 0.083\ x_2} \qquad (4)$$

$$a_{23} = \frac{y_2}{x_2}\frac{x_3}{y_3} = \frac{1 + 0.180\ x_3 - 0.093\ x_1}{1 - 0.083\ x_2 - 0.291\ x_1} \qquad (5)$$

The composition of the gaseous phase in equilibrium can be computed from the composition of the liquid phase by equations:

Card 3/ 6

Z/009/61/000/007/003/004
E112/E135

Contribution to the purification and analysis of isoprene. II.

$$y_1 = \frac{a_{13}\frac{x_1}{x_3}}{1 + a_{13}\frac{x_1}{x_3} + a_{23}\frac{x_2}{x_3}} \quad (6)$$

$$y_2 = \frac{a_{13}\,(x_2/x_3)}{1 + a_{13}\frac{x_1}{x_3} + a_{23}\frac{x_2}{x_3}} \quad (7)$$

$$y_3 = 1 - y_1 - y_2 \quad (8)$$

The authors conclude from Eqs. (1) to (5) that binary or ternary azeotropes are absent from the system isoprene ; 2-methylbutene-1 and 2-methylbutene-2, although this is in disagreement with the finding of M. Lecat (Ref.7: Ann. Soc. Sci. Bruxelles, 63, 58 (1949). The validity of the findings of the Czechoslovak authors was confirmed by practical distillation results, which will be utilized

Card 4/ 6

Z/009/61/000/007/003/004
E112/E135

Contribution to the purification and analysis of isoprene. II.

for the study of the economics of industrial isoprene recovery for the production of synthetic rubber.
There are 1 figure (diagram of Gillespie apparatus), 2 tables (results of analyses) and 9 references: 6 Czech, 2 English and 1 French. The English language references read as follows:
Ref.2: D.T.C. Gillespie, Ind.Eng.Chem. A.E., 18, 575 (1946).
Ref.8: L.H. Horsley, Azeotropic data. Washington, 1954, No.7837.

ASSOCIATION: Ústav fyzikální chemie Československé akademie věd, Praha
(Institute of Physical Chemistry, Czechoslovak AS, Prague)

SUBMITTED: November 14, 1960

Card 5/6

Z/009/61/000/010/001/003
E112/E135

AUTHORS: Grubner, Otto, Rálek, Miloš, and Jírů, Pavel

TITLE: Preparation and properties of molecular sieves A

PERIODICAL: Chemický průmysl, No.10, 1961, pp.521-523

TEXT: Molecular sieves A are commercially not available in Czechoslovakia and the authors now describe laboratory methods for their preparation. Procedures are based on available literature. Compounds prepared were: Sieve 4 A (sodium-aluminosilicate), Sieve 5 A (calcium-aluminosilicate) and Sieve 3.8 A (potassium-aluminosilicate). The produced compounds were examined by the following methods. 1) X-ray powder photographs according to Debye—Scherrer. 2) Quantitative analysis (Al_2O_3 and CaO determined with Complexons). 3) Densities (determined by pycnometer with helium and mercury). 4) Absorption properties. Examples of absorbed compounds are listed for each type of molecular sieve. Properties of the domestic and foreign materials were found to be identical. The authors have also undertaken the preparation and study of molecular sieves 10 X and 13 X, details of which will be published in a future paper.

Card 1/2

Z/009/61/000/010/001/003
Preparation and properties of E112/E135

Acknowledgments are expressed to Messrs. Svoboda, Kučera, Habesberger, Schürrer, Černy, Jakubíčkova, Jirátora and Jiřičkova, for their assistance. There are 1 table and 16 references: 6 Soviet-bloc and 10 non-Soviet-bloc. The four most recent English language references read:

Ref.2: R.M. Barrer. British Chem. Eng. 1 (1959).
Ref.4: R.M. Barrer, J.W. Baynham, F.W. Bultitude, W.M. Meier. J. Chem. Soc. 195 (1959).
Ref.7: R.A. Labine, Chemical Engng 104 (1959).
Ref.11: L. Broussard, D.P. Schoemaker. J. Am. Chem. Soc. Vol.82, 1041 (1960).

ASSOCIATION: Ústav fyzikální chemie ČSAV, Praha
(Institute of Physical Chemistry, ČSAV, Prague)

SUBMITTED: March 28, 1961

Card 2/2

GRUBNER, O.; DUSKOVA, L.

Gas chromatography on adsorbed substances. Coll Cz Chem 26 no.12:3109-3115 D '61.

1. Institut fur physikalische Chemie, Tschechoslowakische Akademie der Wissenschaften, Prag.

JIRU, Pavel; GRUBNER, Oto; RALEK, Milos

Preparation and properties of molecular type X sieves.
Chem prum 12 no.7:355-357 Jl '62.

1. Ustav fyzikalni chemie, Ceskoslovenska akademie ved, Praha.

44861

S/081/62/000/024/020/073
B117/B186

17,1152

AUTHORS: Rálek, M., Yírů, P., Grubner, O., Beyer, H.

TITLE: Molecular sieves with color indication of the humidity content

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1962, 150, abstract 24B1021 (Collect. Czechosl. Chem. Communs, v. 27, no. 1, 1962, 142-146 [Ger.; summary in Russ.])

TEXT: A study was made of a molecular sieve (MS) of the type Ag-A (MSI) which had been obtained by mixing a MS suspension of the type Na-A (MSII) with an 0.2 N $AgNO_3$ solution at 25°C. In both MS the X-ray picture of the MSI with 100% substitution of Na^+ by Ag^+ shows identical crystal lattices. It has been found by thermal differential analysis that at 235°C MSI separates the sorbed water. At 560°C a second exothermal region can be observed which is probably connected with the recrystallization in the MSII lattice caused by the presence of Ag^+. At 900°C a new endothermal region was obtained which is typical of MSI only. Under dynamic conditions, at

Card 1/2

S/081/62/000/024/020/073
B117/B196

Molecular sieves with ...

20°C, MSI like MSII adsorbs H_2O, CO_2, NH_3, CH_3OH, C_2H_5OH but does not adsorb C_6H_6, C_6H_{12}, $CHCl_3$ and C_2H_6CO. The H_2O adsorption was measured also with a quartz-spiral balance at 20°C under a water vapor pressure (p) of $5 \cdot 10^{-3} - 5 \cdot 10^{-1}$ mm Hg. The adsorption isotherms are similar for MSI with arbitrary Ag^+ content. If the Ag^+ content is increased its adsorptive power decreases. The originally yellow color of MSI of all compositions turns into a bright yellow at p 3 - $5 \cdot 10^{-2}$ mm Hg. At p 0.8 - 1 • 10^{-1} mm Hg it turns pink and then grey white. At low p, MSI ca be used as color indicator. [Abstracter's note: Complete translation.]

Card 2/2

GRUBNER, O.

128

PHASE I BOOK EXPLOITATION SOV/6246

Soveshchaniye po tseolitam. 1st, Leningrad, 1961.

Sinteticheskiye tseolity; polucheniye, issledovaniye i primeneniye (Synthetic Zeolites: Production, Investigation, and Use). Moscow, Izd-vo AN SSSR, 1962. 286 p. (Series: Its: Doklady) Errata slip inserted. 2500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk. Komissiya po tseolitam.

Resp. Eds.: M. M. Dubinin, Academician and V. V. Serpinskiy, Doctor of Chemical Sciences; Ed.: Ye. G. Zhukovskaya; Tech. Ed.: S. P. Golub'.

PURPOSE: This book is intended for scientists and engineers engaged in the production of synthetic zeolites (molecular sieves), and for chemists in general.

Card 1/4

Synthetic Zeolites: (Cont.) SOV/6246

COVERAGE: The book is a collection of reports presented at the First Conference on Zeolites, held in Leningrad 16 through 19 March 1961 at the Leningrad Technological Institute imeni Lensovet, and is purportedly the first monograph on this subject. The reports are grouped into 3 subject areas: 1) theoretical problems of adsorption on various types of zeolites and methods for their investigation, 2) the production of zeolites, and 3) application of zeolites. No personalities are mentioned. References follow individual articles.

TABLE OF CONTENTS:

SOV/6246

Synthetic Zeolites: (Cont.)

PRODUCTION OF ZEOLITES

Card ~~5/11~~ 3/4/

SOV/6246

Synthetic Zeolites: (Cont.)

Card ~~12/22~~ 4/4

DUSKOVA, L.; GRUBNER, O.; HANUS, V.; KOSSLER, I.; MATYSKA, B.

Selection of extraction agents for isoprene rectification. Chem prum 13 no.10:513-516 O '63.

1. Ustav fyzikalni chemie, Ceskoslovenska akademie ved, Praha.

GRUBNER, O.; HUCHA, K.

Countercurrent gas-liquid chromatography. Coll Cz Chem 29 no.3: 722-729 Mr '64.

1. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague.

KUBÁŇ, Z.; GRUBNER, O.

Contribution to the theory of non-ideal separation processes using a one-dimensional model of separation column. Coll Czech Chem 29 no.8:1782-1789 Ag '64.

1. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague.

CZECHOSLOVAKIA

GRUBNER, O.; RALEK, M.; ZIKANOVA, A.

Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 2, Feb 1966, pp 852-862.

"Calculation of the mass-transfer coefficients by means of a more exact theory of gas-solid chromatography. Part 1: comparison of columns charged with glass spheres and materials of high internal porosity."

CZECHOSLOVAKIA

SMOLKOVA, E; KRISTOPIKOVA, L; FELTL, L; GRUBNER, O

1. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague (for Grubner); 2. Institute of Analytical Chemistry, Charles University, Prague (for others)

Prague, Collection of Czechoslovak Chemical Communications, No 2, February 1966, pp 450-456

"Determination of the surface of powdery substances by the method of thermal desorption, using organic vapors as the sorbates."

CZECHOSLOVAKIA

GRUBNER, O; RALEK, M; KUCERA, E

Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 7, July 1966, pp 2629-2638

"Calculation of the mass transfer coefficients by means of a more exact theory of gas-solid chromatography. Part 2: Variance and asymmetry of the chromatographic curves in the system carbon dioxide-activated charcoal."

GRUBNIK, N.A.

Study of the acoustic properties of submerged ground at high sonic frequencies. Akust. zhur. 6 no.4:446-453 '60. (MIRA 13:12)

1. Akusticheskiy institut AN SSSR, Moskva.
(Sound—Transmission) (Underwater acoustic)

GRUBNIK, N.N.; LERNER, M.M.; YAMANOVA, L.V.

Review of V.T.Renne's book "Electric condensers." Elektrichestvo no.1:95 Ja '61. (MIRA 14:4)
(Electric capacitors) (Renne, V.T.)

GRUBNIK, N.N.; TAREYEV, B.M., doktor tekhn. nauk, prof., red.

[Enamelled wires; a lecture] Emalirovannye provoda; lektsiia. Moskva, Vsesoiuznyi zaochnyi energ. in-t, 1963. 53 p. (MIRA 17:3)

BAKLAS, A.I.; GRUBNIK, N.V.

Attachment for the street rotary railway snow remover for work in the city. Mats. predl. na gor. elektrotransp. no.9:81-82 '64. (MIRA 18:2)

1. Upravleniye tramvaya Arkhangel'ska.

GRUBNIK, P.(g.Khar'kov)

Builders of power giants. NTO 2 no.12:11-12 D '60. (MIRA 14:3)
(Kharkov--Turbines)

BORISOV, Vladimir Mikhaylovich, stalevar; GRUBNIK, P.D., red.; LIMANOVA, M.I., tekhn. red.

[A matter of worker's honor] Delo rabochei chesti. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1962. 19 p. (MIRA 16:6)

1. Khar'kovskiy traktornyy zavod im. Ordzhonikidze, rukovoditel' brigady kommunisticheskogo truda im. XXII s"ezda KPSS (for Borisov).

(Kharkov—Tractor industry)
(Efficiency, Industrial)

GOL'DFARB, Lev Grigor'yevich; POPOV, Ivan Denisovich; GRUBNIK, P.D., red.; LIMANOVA, M.I., tekhn. red.

[Modernization of equipment and increasing labor productivity; from the work practice of the machinery industry of the Kharkov Economic Administrative Region] Modernizatsiia oborudovaniia i povyshenie proizvoditel'nosti truda; iz opyta raboty mashinostroitel'noi promyshlennosti Khar'kovskogo ekonomicheskogo administrativnogo raiona. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1962. 66 p. (MIRA 16:7)
(Kharkov Economic Region--Machinery industry--Technological innovations)

GRUBNIK, V.M.; GRUBNIK, T.V.

Reinfusion of blood in ectopic pregnancy at a rural district hospital. Akush. i gin. 35 no.1:102 Ja-F '59. (MIRA 12:2)

1. Iz bol'nitsy Kominternovskogo rayona Odesskoy oblasti.
(BLOOD TRANSFUSION,
re-infusion of blood in ectopic pregn. (Rus)
(PREGNANCY, ECTOPIC, ther.
re-infusion of blood (Rus))

GRUBNIK, V.M.; GRUBNIK, T.V.

Torsion of a myomatous uterus in two patients diagnosed preoperatively. Akush.i gin. no.5:119-120 '61. (MIRA 15:1)

1. Zaveduyushchiy khirurgicheskim otdeleniyem Kominternovskoy rayonnoy bol'nitsy Odesskoy oblasti (fur V.M. Grubnik). 2. Zaveduyushchiy ginekologicheskim otdeleniyem Komiternovskoy rayonnoy bol'nitsy Odesskoy oblasti (for T.V. Grubnik).
(UTERUS--TUMORS)

GRUBNIK, V.M.; GRUBNIK, T.V.

Experience in potentiated ether-oxygen anesthesia during obstetric and gynecological operations in a rural district hospital. Akush. i gin. 40 no.5:151-152 S-O '64. (MIRA 18:5)

1. Komiternovskaya rayonnaya bol'nitsa Odesskoy oblasti.

GRUBNIK, V.M.

Volvulus of the gall bladder. Khirurgiia Supplement: 29 '57.
(MIRA 11:4)

1. Kominternovskaya rayonnaya bol'nitsya Odesskoy oblasti.
(GALL BLADDER--DISEASES)

GRUBNIK, V.M.

Tubal pregnancy in strangulated inguinal hernia. Akush. i gin. 33 no.1:98 Ja-F '57 (MLRA 10:4)

1. Iz Kominternovskoy rayonnoy bol'nitsy Odesskoy oblasti (glavnyy vrach A.I. Monshayn)
(HERNIA) (PREGNANCY, EXTRAUTERINE)

GRUBNIK, V.M.

Treatment of cholecystitis in a rural district hospital. Khirurgiia, Moskva 34 no.11:113-114 N '58. (MIRA 12:1)

1. Iz khirurgicheskogo otdeleniya Kominternovskoy rayonnoy bol'nitsy Odesskoy oblasti.
(CHOLECYSTITIS, ther.
in rural district hosp. in Russia (Rus))

GRUBNIK, V.M.

Resection of the stomach following perforating gastric and duodenal ulcers in the rural hospital. Nov. khir. arkh. no.2:133 Mr-Ap '59.
(MIRA 12:7)

1. Khirurgicheskoye otdeleniye Kominternovskoy rayonnoy bol'nitsy, Odesskoy obl.
(STOMACH--SURGERY) (PEPTIC ULCER)

GRUBNIK, V.M.

Treatment of peptic ulcer of the stomach and duodenum with a mixture of drugs. Vrach.delo no.10:1095 O '59. (MIRA 13:2)

1. Rayonnaya bol'nitsa Kominternovskogo rayona Odesskoy oblasti.
(PEPTIC ULCER)

GRUBNIK, V.M. (selo Kominternovskoye Odesskoy oblasti)

Use of anesthesia in the setting of dislocated shoulders.
Fel'd. i akush. 24 no.7:40 Jl '59. (MIRA 12:10)
(SHOULDER JOINT--DISLOCATION) (ANESTHESIA)

GRUBNIK, V.M.; GRUBNIK, T.V.

Reinfusion of blood in ectopic pregnancy at a rural district hospital. Akush. i gin. 35 no.1:102 Ja-F '59. (MIRA 12:2)

1. Iz bol'nitsy Kominternovskogo rayona Odesskoy oblasti.
(BLOOD TRANSFUSION,
re-infusion of blood in ectopic pregn. (Rus)
(PREGNANCY, ECTOPIC, ther.
re-infusion of blood (Rus))

GRUBNIK, V.M.; GRUBNIK, T.V.

Torsion of a myomatous uterus in two patients diagnosed preoperatively. Akush.i gin. no.5:119-120 '61. (MIRA 15:1)

1. Zaveduyushchiy khirurgicheskim otdeleniyem Kominternovskoy rayonnoy bol'nitsy Odesskoy oblasti (fur V.M. Grubnik). 2. Zaveduyushchiy ginekologicheskim otdeleniyem Komiternovskoy rayonnoy bol'nitsy Odesskoy oblasti (for T.V. Grubnik).
(UTERUS--TUMORS)

GRUBNIK, V.M.; GRUBNIK, T.V.

Experience in potentiated ether-oxygen anesthesia during obstetric and gynecological operations in a rural district hospital. Akush. i gin. 40 no.5:151-152 S-O '64. (MIRA 18:5)

1. Komiternovskaya rayonnaya bol'nitsa Odesskoy oblasti.

[illegible]

Results of surgical treatment of thromboembolism of mesenteric and main vessels in elderly persons. Trudy Inst. im. N.V. Sklif. 9:[illegible] '63. (MIRA 18:6)

1. Institut neotlozhnoy khirurgii imeni akademika pomoshchi [illegible] Uzhgorodskiy.

ACCESSION NR: AT4043275 S/2744/64/000/007/0083/0094

AUTHOR: Vol'f, M. B., Grudnikov, I. B., Prokopyuk, L. G., Plan, M. A., Tukov, G.V.

TITLE: Removal of carbon dioxide and sulfur compounds from ethylene by means of synthetic zeolites

SOURCE: Ufa. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti. Trudy*, no. 7, 1964. Sernisty*ye nefti i produkty* ikh pererabotki (Sour crude oil and products of refining), 83-94

TOPIC TAGS: zeolite, carbon dioxide, ethylene, sulfur synthetic zeolite, adsorption column, acetylene, ethylene purification, molecular sieve

ABSTRACT: An investigation of different molecular sieves made at the Gor'kovskaya eksperimental'naya baza (Gor'kiy Experimental Plant) of the VNII NP for the removal of carbon dioxide from ethylene by adsorption showed that the most effective zeolite samples were of the type CaA, NaA being less effective and CaX and NaX being unsuitable for the purification. Using CaA zeolite, optimal results were obtained at a volumetric rate of 1200-9000 liter/liter per hour (linear rate of 0.008-0.05 m/sec. A decrease in temperature from 36 to 3C improved the adsorption properties of CaA zeolite with respect to carbon dioxide. Adsorption on zeolite CaA in one cycle at 22 atm. and 3C, at a rate of

ACCESSION NR: AT4043275

1200-9000 hr.$^{-1}$, decreased the carbon dioxide content from 0.02-0.04% to 0.001%. In order to decrease the amount of sulfur compounds from 1-8 to 0.5 mg/mm^3, up to 30,000 liters of ethylene can be processed with 1 liter of zeolite in one cycle of adsorption. The operation of the adsorption column is shown schematically. The influence of the particle size of the zeolite on the degree of purification was also investigated. Comparison of the results of adsorption with ordinary granules and with adsorbents ground to 1-2 mm showed that the ground zeolite is much more effective than the granulated one. The sulfur content of ethylene before and after purification with zeolites is shown in a table. The desorption of the gases adsorbed on zeolites, including ethylene, can be accomplished by bubbling through a methane-hydrogen mixture at atmospheric pressure and 240-300C, using a mixture of 600-800 liters per liter of zeolite. After desorption, the molecular sieves regain their adsorptive properties. The use of zeolites for removing impurities from ethylene makes it possible to reject the use of aklaline purification completely and to obtain ethylene of a higher degree of purity. The adsorption of acetylene from ethylene before its hydrogenation does not give a sufficiently high degree of separation; hence it cannot be recommended for industrial use. Orig. art. has: 8 figures, 2 tables and 1 chemical equation.

Card 2/3

ACCESSION NR: AT4043275

ASSOCIATION: Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti, Ufa (Bashkir Scientific Research Institute for Petroleum Refining)

SUBMITTED: 00

ENCL: 00

SUB CODE: OC, FP

NO REF SOV: 009

OTHER: 006

3/3

Card

GRUBNIKOV, N. V., Cand. in Tech. Sci.

"External Devices of Automatic High Speed Digital Computing Machines" a paper presented at the Conference on Methods of Development of Soviet Mathematical Machine-Building and Instrument-Building, 12-17 March 1956.

Translation No. 596, 8 Oct 56

GRUBOR, Lazar

Problem of mutual crediting of railroad transportation enterprises and a proposal for its solution. Zeleznice Jug 18 no.1/2:11-20 '62.

[redacted], Inzer

General turnover and average speeds of the turnover of working capital in railroad transport, and their importance for the reproduction and economy of capital. Zeleznice Jug 20 no.7:13-17 Jl '64.

GRUBOR, Lazar

Methods of measurement and analysis of the influence of external factors on labor productivity in railroad transportation. Zeleznice Jug 20 no. 8:10-24 Ag '64.

PHASE I BOOK EXPLOITATION YUG/5509

Grubor, Ljubo, pub.

Atomska biološka hemiska oružja i zaštita; zbirka članaka (Atomic, Biological, and Chemical Weapons and Protection Against Them; Collection of Articles) Zagreb, EPOHA, 1960. 426 p. No. of copies printed not given.

Authors of articles: Pavle Savić, Academician, Milorad Ristić, Engineer, Milorad Mladenović, Doctor, Nenad Raišić, Engineer, Milovan Vidmar, Engineer, Dragutin Milhofer, Engineer, Srđan Hajduković, Doctor, Velimir Vouk, Doctor, Adam Miljković, Doctor, Čedomil Šebetić, Doctor, Milivoje Perišić, Doctor, Svetolik Rašić, Engineer, Miljko Đurić, Engineer and Kazimir Baryla, Doctor.

PURPOSE: This collection of articles is intended for the general reader as well as for personnel in scientific research and similar organizations.

COVERAGE: The book contains 16 articles dealing with general problems of atomic, biological, and chemical warfare weapons and defense methods. The following topics are discussed: nuclear power, reactors, nuclear explosions [including their peaceful application], nuclear weapons, radiological detection and dosimetry, some problems of the effect of nuclear radiation on the organism and of internal

Card 1/ 4

Atomic, Biological, and Chemical Weapons (Cont.) YUG/5509

contamination by radioactive isotopes, problems of germ and chemical warfare, and the use of combat poisons. The Foreword was written by Major General Rade Bulat. References follow most of the articles.

TABLE OF CONTENTS:

Card 2/4

Atomic, Biological, and Chemical Weapons (Cont.) YUG/5509

Báryla, Kazimir, Doctor. Medical Aspects of the Use of Modern Combat Poisons

411

* [Djuric and Đuric are spelling variations; both forms are found in the book.]

AVAILABLE: Library of Congress (UF767.A8)

Card 4/4

AC/dvm/mas
9-14-61

FEYMAN, I.I., kand.tekhn.nauk; GRUBOV, A.F.; GAGOROCHKINA, M.K., studentka; MYASNIKOVA, N.V., studentka

Choosing optimum weft twists for burlap fabrics. Tekst.prom. 18 no.5:70-71 My '58. (MIRA 11:5)

1. Glavnyy inzhener Narvskoy l'no-dzhutovoy fabriki (for Grubov).
2. Kostromskoy tekstil'nyy institut (for Gagarochkina, Myasnikova).
(Burlap)

AUTHOR: Grubov, P.V. 104-2-25/38

TITLE: The struggle against dustiness in the fuel supply of a heat and electric power station. (Borba s zapylennost'yu toplivopodachi TETs)

PERIODICAL: "Elektricheskie Stantsii" (Power Stations) 1957, Vol.28, No.2, pp. 84 - 85 (U.S.S.R.)

ABSTRACT: Much of the dust in power stations comes from conveyor transfer points which are not always properly designed so as to cut down the amount of dust to a minimum. This short note describes steps that were taken at a peat burning power station to improve matters. Different arrangements of transfer points, including hermetic sealing are illustrated by sketches. The dust extracting installation was improved.

There are 5 figures.

AVAILABLE:

Card 1/1

GRUBOV, V.I. [Hrubov, V.I.]

Investigation of the operating conditions of a carbonization column conducted with the aid of the "Ural-1" electronic computer. Khim. prom. [Ukr.] no.2:52-56 Ap-Je '63.

Electronic computers in the chemical and petroleum refining industry. Ibid.:82-84 (MIRA 16:8)

1. Vychislitel'nyy tsentr Kiyevskogo gosudarstvennogo universiteta.

GRUBOV, V.I. [Hrubov, V.I.] (Kiyev)

Local characteristics of a regulated carbonization column.
Avtomatyka 9 no.1:64-68 '64. (MIRA 17:3)

GRUBOV, V. I.

"Another species of the Genus Rhamnus L.S. Str," Bot. mat. Gerb., 14, 1951 (Buckthorn)

GRUBOV, V.I.

Family Ebenaceae. Flora SSSR 18:474-483 '52. (MLRA 6:5)
(Ebenaceae)

GRUBOV,V.I.

600

1. GRUBOV, V. I.; YUNATOV, A. A.

2. USSR (600)

4. Zoology - Georgraphical Distribution

7. Basic peculiarities of the flora in the Mongolian Republic and its geographical distribution. Bot. zhur. 37 No. 1, 1952.
Botanicheskiy Institut im. V. L. Komarova Akademii Nauk SSSR Leningrad
Rcd. 20 July 1951

9a. Monthly List of Russian Accessions. Library of Congress, April 1952.
UNCLASSIFIED

GRUBOV, V.I.

Plant and geobotanical districting of the Mongolian People's Republic. Vop.geog. no.35:172-201 '54. (MLRA 7:12)
(Mongolia--Phytogeography)

GRUBOV, V.I.; DOROFEYEV, P.I.

Afrikan Nikolaevich Krishtofovich (1885-1953). Bot.zhur. 39 no.2: 305-312 Mr-Ap '54. (MLRA 7:6)
(Krishtofovich, Afrikan Nikolaevich, 1885-1953)

GRUBOV, V. I.

BAYKOVSKAYA, T.N.; GRUBOV, V.I.

P.A. Mchedlishvili's criticism of A.N.Krishtofovich. Bot.zhur. 39 no.3:459-464 My-Je '54. (MLRA 7:7)

1. Botanicheskiy institut im. V.L.Komarova, Akademii nauk SSSR, Leningrad.
(Paleontology) (Mchedlishvili, P.A.) (Krishtofovich, A.N.)

GRUBOV, V.I.

New species of Mongolian flora. Bot.mat.Gerb. 17:3-25 '55.
(MLRA 9:5)

(Mongolia--Botany)

GRUBOV, V.I.

Publication data on volumes 1 and 2 of the "Catalog of plants" by Martin Vahl. Bot.zhur.40 no.5:747-748 S-O '55. (MLRA 9:4)

1.Botanicheskiy institut imeni V.L.Komarova Akademii nauk SSSR, Leningrad.

(Botany--Catalogs and collections)

GRUBOV, V.I.

Scope of a species such as Valeriana officinalis. Bot.zhur.40 no.6:815-824 N-D '55. (MLRA 9:4)
(Valerian) (Botany--Classification)

GRUBOV,V.I.; NEMCHINOV,V.S., akademik, glavnyy redaktor; LAVRENKO,Ye.M., redaktor; SHUL'ZHENKO,I.F., redaktor; LIPSHITS,S.Yu., redaktor; PEVZNER,R.S., tekhnicheskiy redaktor.

Compendium of flora of the Mongolian People's Republic. Trudy Mong. kom. no.67:3-307 '55. (MLRA 8:6)

1. Chlen-korrespondent Akademii nauk SSSR (for Lavrenko).
(Mongolia--Botany)

KRISHTOFOVICH, A.N. [deceased]; PALABIN, I.V. [deceased]; SHAPARENKO, K.K. [deceased]; YARMOLENKO, A.V. [deceased]; BAYKOVSKAYA, T.N.; GRUBOV, V.I.; IL'INSKAYA, I.A.; SHISHKIN, B.K., redaktor; SHCHEBINA, T.S., redaktor; KIRMARSKAYA, A.A., tekhnicheskiy redaktor.

[Oligocene flora of Mount Ashutas in Kazakhstan] Oligotsenovaia flora gory Ashutas v Kazakhstane. Moskva, Izd-vo Akademii nauk SSSR, 1956, 178 p. (Akademiia nauk SSSR. Botanicheskii institut. Trudy, Ser. 8, no.1. Paleobotanika). (MLRA 9:8)

1. Chlen-korrespondent AN SSSR (for Krishtofovich, Shishkin)
(Kazakhstan--Paleobotany)

GRUBOV, V.I.

The nature of our regional flora ("Flora of the Kirghiz S.S.R. Guide to plants of the Kirghiz S.S.R." Reviewed by V.I. Grubov. Bot.zhur. 41 no.3:421-427 Mr '56. (MLRA 9:8)

1. Botanicheskiy institut imeni V.L. Komarova Akademii nauk SSSR, Leningrad.
(Kirghizistan--Botany)

COUNTRY : USSR
CATEGORY : Cultivated plants - Subtropical, Tropical. M

[illegible] : [illegible]

AUTHOR : Arnbov, V. I.
INST. : Botanical Institute, AS USSR
TITLE : Exotic Plants of Zakarpat'ye as Indicators of Climate.

PUBLISHED : Tr. Botan. in-ta AN USSR, 1957, ser. 5, vyp. 11, 339-347

ABSTRACT : About 40 species of exotic plants cultivated in Zakarpatskaya oblast' of Ukrainian SSR are divided into 3 groups according to their origin: Mediterranean, North American and Japanese-Chinese. The successful cultivation of the most warmth-loving exotics in Zakarpatskaya oblast' gives a basis for the recommendation of the cultivation of tea in the foothill zone of Uzhgorod-Koustskiy ridge. For the cold resistant varieties of tea, raised in the more northern regions of Soviet Union, regions of Prikarpatskaya lowland and the southern slopes of Uzhgorod-Koustskiy ridge will be probably suitable. -- M. K. Neulina

CARD: 1/1

ARNBOV, V.I.

Was K. Fraas the precursor of creative Darwinism? (Concerning I.A. Khalifman's article in "Agrobiologiia"). Bot.zhur. 42 no.3:488-493 Mr '57. (MLRA 10:5)

1.Botanicheskiy institut im. V.L. Komarova Akademii nauk SSSR, Leningrad.

(Fraas, Karl Nikolaus, 1810-1875)
(Species, Origin of)
(Khalifman, I.A.)

GRUBOV, V.I.

"Natural plant families" [in German]. Vol.20d. Reviewed by V.I.Grubov. Bot.zhur. 42 no.10:1523-1527 O '57. (MIRA 10:10)

1. Botanicheskiy institut im.V.L.Komarova AN SSSR, Leningrad.
(Buckthorn)

KOMAROV, V.L., akademik, glavnyy red.;SHISHKIN, B.K., red. izdaniya; BOBROV, Ye.G., doktor biol.nauk, prof.red.; VASIL'CHENKO, I.T., red.; GORSHKOVA, S.G., red.; GRIGOR'YEV, Yu.S., red.; GRUBOV, V.I., red.; DOROFEYEV, P.I., red.; IL'INSKAYA, I.A., red.; KLOKOV, M.V., red.; KUPRIYANOVA, L.A., red.; LINCHEVSKIY, I.A., red.; NOVOPOKROVSKIY, I.V., red.; POBEDIMOVA, Ye.G., red.; POPOV, M.G., red.; POYARKOVA, A.I., red.; SHTEYNBERG, Ye.I., red.; TSVELEV, N.N., red.; SMIRNOVA, A.V., tekhn.red.

[Flora of the U.S.S.R.] Flora SSSR. Moskva, Izd-vo Akad. nauk SSSR, 1958. 775 p. (MIRA 12:7)

1. Chlen-korrespondent AN SSSR (for Shishkin).
(Botany)

ARTYUSHENKO, Z.T.; VASIL'YEV, I.V.; GZYRYAN, M.S.; GOLOVACH, A.G.; GRUBOV, V.I.; ZAMYATNIN, B.N.; PIDOTTI, O.A.; PILIPENKO, F.S.; POLETIKO, O.M., kand.biolog.nauk; RODIONENKO, G.I.; RUSANOV, F.N.; SAAKOV, S.G.; SOKOLOV, S.Ya., prof., doktor biolog.nauk, red.; FEDOROV, Al.A.; SHIPCHINSKIY, N.V. [deceased]; SHUL'GINA, V.V.; SHUKHOBODSKIY, B.A.; GOLOVNIN, M.I., red. izd-va; KRUGLIKOVA, N.A., tekhn.red.

[Trees and shrubs of the U.S.S.R.; wild, cultivated, and promising exotic trees and shrubs] Derev'ia i kustarniki SSSR; dikorastushchie, kul'tiviruemye i perspektivnye dlia introduktsii. Moskva. [Vol.4. Angiosperms: Leguminosae - Punicaceae] Pokrytosemennye: Semeistva bobovye-granatovye. 1958. 973 p. (MIRA 11:12)

1. AN SSSR. Botanicheskiy institut.
(Angiosperms) (Trees) (Shrubs)

Grubov, V.

格洛勃夫

V. Grubov,
Botany Institute, Soviet Academy of Sciences

"Generic Cystopteris Bernh. Species Nova Ex Prov. Tsinghai. Cystopteris Tangutica Grub. Sp. Nova"

SO: Chu-wu Fen-lei-hsueh Pao, pp. 295-[illegible], Vol. VII, No. 4, November 1958

+1

BORISOVA, A.G.; BOCHANTSEV, V.P.; VASIL'CHENKO, I.T.; GOLUBKOVA, V.F.; GORSHKOVA, S.G.; GRUBOV, V.I.; KIRPICHNIKOV, M.E.; SMOL'YANINOVA, L.A.; TAMAMSHYAN, S.G.; TSVELEV, N.N.; TSVETKOVA, L.I.; YUZEP-CHUK, S.V.; SHISHKIN, B.K., red.toma; BOBROV, Ye.G., doktor biol.nauk, prof., red.; SMIRNOVA, A.V., tekhn.red.

[Compositae] Compositae. Moskva, Izd.-vo Akad.nauk SSSR, 1959. 630 p.(Akademiia nauk SSSR. Botanicheskii institut. Flora SSSR. no.25) (MIRA 13:4)

(Compositae)

BOBROV, Ye.G., doktor biol.nauk, prof.; VASIL'CHENKO, I.T.; GORSHKOVA, S.G.; GRIGOR'YEV, Yu.S.; GRUBOV, V.I.; DOROFEYEV, P.I.; IL'INSKAYA, I.A.; KLOKOV, M.V.; KUPRIYANOVA, L.A.; LINCHEVSKIY, I.A.; NOVOPOKROVSKIY, I.V.; POBEDIMOVA, Ye.G.; POPOV, M.G.; POYARKOVA, A.I.; SHTEYNBERG, Ye.I.; TSVELEV, N.N.; SHISHKIN, B.K., red. izdaniya; SMIRNOVA, A.V., tekhn.red.

[Dicotyledons] Dicotyledons. Moskva, Izd-vo Akad.nauk SSSR, 1959. 775 p. (Akademiia nauk SSSR. Botanicheskii institut. Flora SSSR, vol.23) (MIRA 13:4)

(Dicotyledons)

BORISOVA, A.G.; BOCHANTSEV, V.P.; VASIL'CHENKO, I.T.; GOLUBKOVA, V.F.; GORSHKOVA, S.G.; GRUBOV, V.I.; KIRPICHNIKOV, M.E.; SMOL'YANINOVA, L.A.; TAMAMSHYAN, S.G.; TSVELEV, N.N.; YUZEPCHUK, S.V.; KOMAROV, V.L., akademik, glavnyy red.; SHISHKIN, B.K., red.izdaniya; BOBROV, Ye.G., doktor biol.nauk, prof., red.; SMIRNOV, A.V., tekhn.red.

[Flora of the U.S.S.R.] Flora SSSR. Moskva, Izd-vo Akad.nauk SSSR. 1959. 630 p. (MIRA 12:8)

1. Chlen-korrespondent AN SSSR (for Shishkin).
(Compositae)

GRUBOV, V.I.

Chenopodiacaea of Inner Mongolia collected by M.P.Petrov.
Izv.AN Turk.SSR no.3:82-86 '59. (MIRA 12:11)
(Mongolia--Goosefoot)

GRUBOV, V.I.

A new Mongolian species of Kalidium. Bot.mat.Gerb. 19:102-104 '59. (MIRA 12:8)

(Asia, Central--Kalidium)

GRUBOV, V.I.

Two new valerian species from the Himalaya. Bot.mat.Gerb. 19:342-348 '59. (MIRA 12:8)
(Himalayas--Valerian)

GRUBOV, V.I.

List of Dzungarian (China) plants collected by V.S.Moiseenko in 1951-1954. Bot.mat.Gerb. 19:531-553 '59. (MIRA 12:8)
(Dzungaria--Botany)

GOLOVACH, A.G.; GRUBOV, V.I.; ZAMYATNIN, B.N.; LINCHEVSKIY, I.A.; PETYAYEV, S.I.; PIDOTTI, O.A.; PILIPENKO, F.S.; POLETIKO, O.M.; RODIONENKO, G.I.; SAAKOV, S.G.; SELIVANOVA-GORODKOVA, Ye.A.; SOKOLOV, S.Ya., prof., doktor biolog.nauk; SHIPCHINSKIY, N.V. [deceased]; BELKINA, M.A., red.izd-va; BLEYKH, E.Yu., tekhn.red.

[Trees and shrubs of the U.S.S.R.; wild and cultivated species and plants considered for prospective introduction] Derev'ia i kustarniki SSSR; dikorastushchie, kul'tiviruemye i perspektivnye dlia introduktsii. Moskva, Vol.5. [Angiosperms: myrtle and olive families] Pokrytosemennye: Semeistva mirtovye-maslinovye. 1960. 543 p. (MIRA 13:12)

1. Akademiya nauk SSSR. Botanicheskiy institut.
(Myrtle) (Olive) (Plant introduction)

GRUBOV, V.I.

Some notes on ferns in the "Flora of the U.S.S.R." Bot. mat.Gerb. 20:31-34 '60. (MIRA 13:7)
(Asia--Ferns)

GRUBOV, V. I.

Doc Biol Sci - (diss) "Central Asia in botanico-geographic relations. Generalizing report on studies presented in competition..." Leningrad, 1961. 22 pp; (Academy of Sciences Uzbek SSR, Joint Academic Council of the Division of Biological Sciences); 200 copies; free; (KL, 7-61 sup, 226)

GRUBOV, V.I.

Two new species of the goosefoot family. Bot. mat. Gerb. 21:125-129 '61. (MIRA 14:10)
(Brahmaputra Valley--Bugseed)
(Nepal--Saltwort)

GRUBOV, V.I.; VASIL'CHENKO, I.T., red.; LINCHEVSKIY, I.A., red.; LIFSHITS, S.Yu., red.; LEBEDEV, D.V., red.

[Plants of Central Asia; according to materials of the V.L. Komarov Botanical Institute] Rastoniia TSentral'noi Azii; po materialam Botanicheskogo Instituta im. V.L.Komarova. Sost. V.I.Grubov. Moskva, Izd-vo AN SSSR. No.1. [Preface. Ferns. Bibliography] Vvedenie. Paporotniki. Bibliografiia. 1963. 165 p. (MIRA 17:8)

1. Akademiya nauk SSSR. Botanicheskiy institut.

[illegible], V.I. [Hrabar, V.]

Static optimization of the carbonization column with the use of the universal calculating machine. Khim. prom. [Ukr.] no.4:38-41 O-D'63. (MIRA 17:6)